

To: Stephanie Berardi [berardi.steph@gmail.com]; ave Kluesner/R2/USEPA/US@EPA;Bill Young [bill@youngenvironmentalllc.com]; ill Young [bill@youngenvironmentalllc.com]
Cc: Alice Yeh/R2/USEPA/US@EPA;Stephanie Vaughn/R2/USEPA/US@EPA;Elizabeth Butler/R2/USEPA/US@EPA[]; tephanie Vaughn/R2/USEPA/US@EPA;Elizabeth Butler/R2/USEPA/US@EPA[]; lizabeth Butler/R2/USEPA/US@EPA[]
From: roger kuhns
Sent: Fri 8/19/2011 7:33:42 PM
Subject: Re: Passaic River Sediment Removal
http://stylinstephproductions.com/blog_rss.xml
<http://www.epa.gov/region2>
<http://blog.epa.gov/greeningtheapple/>
http://stylinstephproductions.com/blog_rss.xml

Stephanie and David,

Thank you for including me in the communication, Stephanie. You're basically right about the phytoremediation methodology, especially with regards to Hg, and through the use of bacteria for the PAHs. The removal of dioxins and PCBs is a tougher call with phyto. Lots of ideas and some results are out there. I worked with a doctor (who was tracking cancer hot spots) and river sediments in regards to these contaminants in the Fox River in Green Bay Wisconsin. That site had been heavily impacted by the paper industry.

But, this proposal looks very interesting, and I would hope we can put a team together to address the EPA's specific needs. It certainly will require a multi-solution design that draws on the strengths of sustainable practices and plant-bacterial processes to minimize other impacts to the environment. I proposed a phytoremediation solution for a landfill site for the EPA while at Black & Veatch (before I founded SustainAudit LLC), and if there's interest I can forward some notes on that.

Cheers,

Roger
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From: Stephanie Berardi <berardi.steph@gmail.com>
To: Kluesner.Dave@epamail.epa.gov; Bill Young <bill@youngenvironmentalllc.com>; 'roger kuhns' <roger_kuhns_monologues@yahoo.com>
Cc: Yeh.Alice@epamail.epa.gov; Vaughn.Stephania@epamail.epa.gov; Butler.Elizabeth@epamail.epa.gov
Sent: Friday, August 19, 2011 1:44 PM
Subject: RE: Passaic River Sediment Removal

David,

Thank you for the quick reply. I am currently a grad student at the University of Pennsylvania, obtaining a degree in sustainability, who has studied the effects of bioremediation/phytoremediation techniques as well as applied those principals to a Brownfield site in Oxford Township, in Warren County NJ. I have cc'd two experts in this field, Bill Young and Roger Kuhns who can provide a comprehensive site analysis of this clean up method. Bill worked on Fresh Kills and did an amazing transformation of that project using some of these very same methods. The trick is, there is no trick. Bio & Phyto remediation is a proven, cost effective method to get the job done immediately and in an environmentally friendly way. If these techniques were applied back in 2001-2008 when the site was being reviewed you probably would have

already seen a 50-75% reduction in contaminants. If these techniques were applied now instead of waiting until the spring to excavate, you may also see a dramatic rate of improvement before the spring. I think that it would be appropriate to reevaluate the current proposed mitigation of soil removal and incineration. I understand that you want to remove the toxins immediately, but in my opinion, the soil removal in the spring of next year is not an immediate solution. Phytotechnologies applied now is an immediate solution. For example, those particular contaminants named below are some plants food source; mushrooms, brake fern, hybrid poplars, willows, brake fern, and Zucchini (to name a few) are known plant species that could remediate many of these toxins in a relatively short period of time. Based upon my research findings, I do know that there is much more cost effective approach to cleaning this site up quickly than the current proposed method beginning in the spring of next year while being as eco-friendly to the land, water, and air. I would strongly suggest re evaluating this mitigation process as a viable solution to this and other Superfund sites. I'm sure that Bill or Roger would be happy to provide a cost effective, comprehensive site analysis with remedial options for you to choose from if you are still looking for proposals for the job.

Sincerely,
Stephanie Berardi, CEO
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From: Kluesner.Dave@epamail.epa.gov [mailto:Kluesner.Dave@epamail.epa.gov]
Sent: Friday, August 19, 2011 10:13 AM
To: Stephanie Berardi
Cc: Yeh.Alice@epamail.epa.gov; Vaughn.Steph@epamail.epa.gov;
Butler.Elizabeth@epamail.epa.gov
Subject: Re: Passaic River Sediment Removal

Thank you Stephanie for your interest in the project and your questions and comments. I have copied the project managers on this reply. The removal of the most highly contaminated sediment adjacent to the Diamond Alkali Superfund site will take the dioxin-laden sediment out of the food chain immediately. Longer term efforts will focus on the remaining contaminants. EPA is looking at a number of remedial options for cleanup of the lower 8 miles of the Passaic. This includes decontamination technologies as a possible remedy or part of a remedy. We anticipate putting out cleanup proposals later next year and welcome your input on technologies which are proven, commercially viable technologies that can address the multitude of contaminants found in the sediments (PCBs, dioxins, mercury, PAHs, etc.) That's the trick here, finding a technology or technologies that are commercially viable for mitigating the threats posed by multiple contaminants present in millions of cubic yards of sediment within a timeframe that is feasible and reasonable.

David Kluesner - Public Affairs
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From: Stephanie Berardi <berardi.steph@gmail.com>
To: Dave Kluesner/R2/USEPA/US@EPA

Date: 08/19/2011 12:39 AM
Subject: Passaic River Sediment Removal

David,

It seems counterproductive to remove contaminated soil and transport that elsewhere. Additionally it also contributes a to a negative carbon output (1. Removing the soil, 2. Processing, 3. Transportation). It would be much more cost effective to consider bioremediation techniques as a less expensive alternative with a lower ecological footprint. How is the work of Tierra Solutions an economically viable solution to the sustainability of our land and air quality?

Sincerely,
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